

REMARKS/ARGUMENTS

Applicants would like to thank Examiner Nguyen for the indication of allowable subject matter in the present application. It is believed that upon entry of the present amendment, all remaining claims will be in condition for allowance.

Claims 1-5, 7 and 25-35 are active in this application, claims 6 and 8-24 having been canceled, and new claims 25-35 having been added. Claim 1 has been amended by adding the limitations of claim 6. New claim 25 is supported by the specification at page 26, lines 2-16. New claim 26 is supported by the specification at page 26, lines 6-9. New claims 27-29 are supported by the specification at page 26, lines 10-16. It is noted that it is permissible for Applicants to include a negative limitation to exclude an embodiment that is explicitly recited within the specification. Since the specification specifically recites “polymer-like polyhydric alcohols”, it is therefore acceptable for Applicants to specifically exclude polymeric polyhydric alcohols from the claims (with the wording modification to avoid the use of the term “like” in the claims). New claims 30-35 correspond to original claims 2-7. The specification has been amended to replace the phrase “was replaced by” with the phrase “was used in place of”, as suggested by the Examiner. This was clearly a transliteration error in conversion of the application from Japanese to English. No new matter has been added by these amendments.

Since the Examiner has indicated that claim 6 was allowable, and claim 1 has now been amended to include the limitations of claim 6, claim 1 and its dependent claims 2-5 and 7 are therefore allowable over the art. Accordingly, the following comments will address the cited art in relation to newly added claims 25-35.

The present invention as claimed in claim 25 relates to a conductive polymer gel comprising water as a main component, a conductive conjugated polymer, an alcohol selected from the group consisting of a monohydric alcohol, a glycol, a chain polyhydric alcohol, and

a cyclic polyhydric alcohol, wherein the alcohol is not a polymeric polyhydric alcohol, and optionally, a surfactant, wherein an amount of the water in the conductive polymer gel is from 66 weight percent to 98 weight percent. Importantly, the composition of this claim requires the presence of an alcohol, which can be a monohydric alcohol, a glycol, a chain polyhydric alcohol or a cyclic polyhydric alcohol. However, the alcohol cannot be a polymeric alcohol, such as a polyalkylene glycol.

The conductive polymer gel of the present invention provides good conductivity even when exposed to an atmosphere at a temperature lower than the freezing point of water. Thus, the polymer gel can be used for variety of purposes requiring exhibition of a stable function under these severe conditions such as conductive gels having functionality including a response to electrolytic stimulation, response to moisture absorption, or heat sensitizing responses, particularly in electrolytes of cells.

Inganäs et al, with evidentiary support for inherency from Elmer et al and Ghosh et al, cannot anticipate the present invention of claims 25-35, nor can they render it obvious. In particular, Inganäs et al. relates to a polymer gel electrode which contains microgel particles dispersed in an aqueous medium. The composition of Inganäs et al. is a conductive polymer gel which contains a polystyrenesulfonic acid-doped polyethylenedioxythiophene, **polyethyleneglycol**, and electrolyte such as an aqueous magnesium sulfate solution. However, there is nothing in Inganäs et al. to disclose or suggest a polymer gel having the required level of water of the present claims, while using an alcohol that is NOT a polymeric alcohol such as the polyethyleneglycol of Inganäs. There is no disclosure or suggestion in Inganäs regarding the use of such a non-polymeric alcohol as required in the present invention, and thus, Inganäs et al. cannot anticipate the present invention and cannot suggest such a high water content polymer gel as claimed in new claim 25. Additionally, new claims

Application No. 10/542,917  
Reply to Office Action of September 15, 2009

26-35, which are dependent on claim 25, are likewise novel and unobvious in view of the cited references.

Applicants submit that the application is now in condition for allowance and early notification of such action is earnestly solicited.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, L.L.P.  
Norman F. Oblon



---

J. Derek Mason, Ph.D.  
Attorney of Record  
Registration No. 35,270

Customer Number  
**22850**

Tel: (703) 413-3000  
Fax: (703) 413 -2220  
(OSMMN 07/09)